



213721\_Seq\_ST25  
SEQUENCE LISTING

<110> Feussner et al.

<120> Linoleate- and Linolenate-Lipoxygenase-Mutants

<130> 213721

<141> US 09/937,908  
<140> 2002-01-07

<150> PCT/EP00/02545  
<151> 2000-03-22

<150> DE 19914464.8  
<151> 1999-03-30

<160> 3

<170> PatentIn Ver. 2.1

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Arg Val Ser Ser Leu Gly Gly Asn Lys Ile Lys Gly Lys Val Ile Leu  
35 40 45  
Met Arg Ser Asn Val Leu Asp Phe Thr Glu Phe His Ser Asn Leu Leu  
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Asp Asn Phe Thr Glu Leu Leu Gly Gly Val Ser Phe Gln Leu Ile  
65 70 75 80  
Ser Ala Thr His Thr Ser Asn Asp Ser Arg Gly Lys Val Gly Asn Lys  
85 90 95  
Ala Tyr Leu Glu Arg Trp Leu Thr Ser Ile Pro Pro Leu Phe Ala Gly  
100 105 110  
Glu Ser Val Phe Gln Ile Asn Phe Gln Trp Asp Glu Asn Phe Gly Phe  
115 120 125  
Pro Gly Ala Phe Phe Ile Lys Asn Gly His Thr Ser Glu Phe Phe Leu  
130 135 140  
Lys Ser Leu Thr Leu Asp Asp Val Pro Gly Tyr Gly Arg Val His Phe  
145 150 155 160  
Asp Cys Asn Ser Trp Val Tyr Pro Ser Gly Arg Tyr Lys Lys Asp Arg  
165 170 175  
Ile Phe Phe Ala Asn His Val Tyr Leu Pro Ser Gln Thr Pro Asn Pro  
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## 213721\_Seq\_ST25

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Thr Gly Glu Arg Lys Glu Trp Asp Arg Ile Tyr Asp Tyr Asp Val Tyr  
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Asn Asp Ile Ala Asp Pro Asp Val Gly Asp His Arg Pro Ile Leu Gly  
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Gly Thr Thr Glu Tyr Pro Tyr Pro Arg Arg Gly Arg Thr Gly Arg Pro  
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Arg Ser Arg Arg Asp His Asn Tyr Glu Ser Arg Leu Ser Pro Ile Met  
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Ser Leu Asp Ile Tyr Val Pro Lys Asp Glu Asn Phe Gly His Leu Lys  
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Met Ser Asp Phe Leu Gly Tyr Thr Leu Lys Ala Leu Ser Ile Ser Ile  
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Lys Pro Gly Leu Gln Ser Ile Phe Asp Val Thr Pro Asn Glu Phe Asp  
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Asn Phe Lys Glu Val Asp Asn Leu Phe Glu Arg Gly Phe Pro Ile Pro  
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Phe Asn Ala Phe Lys Thr Leu Thr Glu Asp Leu Thr Pro Pro Leu Phe  
 340 345 350

Lys Ala Leu Val Arg Asn Asp Gly Glu Lys Phe Leu Lys Phe Pro Thr  
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Pro Glu Val Val Lys Asp Asn Lys Ile Gly Trp Ser Thr Asp Glu Glu  
 370 375 380

Phe Ala Arg Glu Met Leu Ala Gly Pro Asn Pro Leu Leu Ile Arg Arg  
 385 390 395 400

Leu Glu Ala Phe Pro Pro Thr Ser Lys Leu Asp Pro Asn Val Tyr Gly  
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Asn Gln Asn Ser Thr Ile Thr Glu Glu His Ile Lys His Gly Leu Asp  
 420 425 430

Gly Leu Thr Val Asp Glu Ala Met Lys Gln Asn Arg Leu Tyr Ile Val  
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Asp Phe His Asp Ala Leu Met Pro Tyr Leu Thr Arg Met Asn Ala Thr  
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Ser Thr Lys Thr Tyr Ala Thr Arg Thr Leu Leu Leu Lys Asp Asp  
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Gly Thr Leu Lys Pro Leu Val Ile Glu Leu Ala Leu Pro His Pro Gln  
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Gly Asp Gln Leu Gly Ala Ile Ser Lys Leu Tyr Phe Pro Ala Glu Asn  
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Gly Val Gln Lys Ser Ile Trp Gln Leu Ala Lys Ala Tyr Val Thr Val  
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## 213721\_Seq\_ST25

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Ala Val Leu Glu Pro Phe Val Ile Ala Thr His Arg Gln Leu Ser Val  
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Leu His Pro Ile His Lys Leu Leu Val Pro His Tyr Lys Asp Thr Met  
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Phe Ile Asn Ala Ser Ala Arg Gln Val Leu Ile Asn Ala Asn Gly Leu  
 580 585 590

Ile Glu Thr Thr His Tyr Pro Ser Lys Tyr Ser Met Glu Leu Ser Ser  
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Ile Leu Tyr Lys Asp Trp Thr Phe Pro Asp Gln Ala Leu Pro Asn Asn  
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Leu Met Lys Arg Gly Leu Ala Val Glu Asp Ser Ser Ala Pro His Gly  
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Leu Arg Leu Leu Ile Asn Asp Tyr Pro Phe Ala Val Asp Gly Leu Asp  
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Ile Trp Ser Ala Ile Lys Thr Trp Val Gln Asp Tyr Cys Cys Leu Tyr  
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Tyr Lys Asp Asp Asn Ala Val Gln Asn Asp Phe Glu Leu Gln Ser Trp  
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Trp Asn Glu Leu Arg Glu Lys Gly His Ala Asp Lys Lys His Glu Pro  
 690 695 700

Trp Trp Pro Lys Met Gln Thr Leu Ser Glu Leu Ile Glu Ser Cys Thr  
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Thr Ile Ile Trp Ile Ala ser Ala Leu His Ala Ala Val Asn Phe Gly  
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Gln Tyr Pro Tyr Gly Gly Tyr Ile Leu Asn Arg Pro Thr Thr Ser Arg  
 740 745 750

Arg Phe Met Pro Glu Val Gly Thr Ala Glu Tyr Lys Glu Leu Glu Ser  
 755 760 765

Asn Pro Glu Lys Ala Phe Leu Arg Thr Ile Cys Ser Glu Leu Gln Ala  
 770 775 780

Leu Val Ser Ile Ser Ile Ile Glu Ile Leu Ser Lys His Ala Ser Asp  
 785 790 795 800

Glu Val Tyr Leu Gly Gln Arg Ala Ser Ile Asp Trp Thr Ser Asp Lys  
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Ile Ala Leu Glu Ala Phe Glu Lys Phe Gly Lys Asn Leu Phe Glu Val  
 820 825 830

Glu Asn Arg Ile Met Glu Arg Asn Lys Glu Val Asn Leu Lys Asn Arg  
 835 840 845

Ser Gly Pro Val Asn Leu Pro Tyr Thr Leu Leu Val Pro Ser Ser Asn  
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